Comparisons of Job Characteristics

Focus Occupation: Commercial and Industrial Designers (27-1021)
Associated Occupation: Mechanical Engineers (17-2141)

Compare Knowledge
Compare Skills
Compare Abilities
Compare Detailed Work Activities
Compare Tools and Technologies

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge

Similarity of Focus Occupation to Associated Occupation: 92

Focus Occupation: Commercial and Industrial Designers (27-1021)
Associated Occupation: Mechanical Engineers (17-2141)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Engineering and Technology	5.7	21.5	18.3	<	Expanded education and/or training may be required
Design	5.2	21.0	22.2	0	Current knowledge level may be sufficient
Mathematics	9.2	18.1	10.7	<<	Extensive education and/or training may be required
Mechanical	6.8	18.1	15.3	<	Expanded education and/or training may be required
Physics	4.3	15.3	9.6	<<	Extensive education and/or training may be required
Production and Processing	6.0	14.2	14.3	0	Current knowledge level may be sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 76

Focus Occupation: Commercial and Industrial Designers (27-1021)
Associated Occupation: Mechanical Engineers (17-2141)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Mathematics	6.2	15.3	8.7	<<	Extensive development of skills in this area may be required
Complex Problem Solving	9.1	14.8	12.0	<	A higher skill level may be required
Judgment and Decision Making	9.4	14.1	11.0	<<	Extensive development of skills in this area may be required
Science	4.5	13.6	6.6	<<	Extensive development of skills in this area may be required
Operations Analysis	5.0	13.0	12.0	0	Current skill level may be sufficient

Systems Evaluation	6.4	12.0	9.4	<	A higher skill level may be required
Technology Design	2.6	11.0	9.5	<	A higher skill level may be required
Programming	2.2	7.5	2.8	<<	Extensive development of skills in this area may be required
Installation	1.7	6.3	1.5	<<	Extensive development of skills in this area may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities

Similarity of Focus Occupation to Associated Occupation: 91

Focus Occupation: Commercial and Industrial Designers (27-1021)
Associated Occupation: Mechanical Engineers (17-2141)

Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Deductive Reasoning	10.6	15.8	14.1	<	Some improvement in abilities may be required
Written Comprehension	11.0	15.8	12.3	<<	Extensive improvement in abilities may be required
Mathematical Reasoning	6.3	15.7	9.6	<<	Extensive improvement in abilities may be required
Information Ordering	9.9	15.4	11.9	<<	Extensive improvement in abilities may be required
Near Vision	11.1	13.3	13.5	0	Current ability level may be sufficient
Number Facility	6.3	13.0	7.0	<<	Extensive improvement in abilities may be required
Category Flexibility	9.0	12.7	11.5	<	Some improvement in abilities may be required
Visualization	7.5	12.7	13.1	0	Current ability level may be sufficient
Selective Attention	8.7	11.0	9.3	<	Some improvement in abilities may be required
Perceptual Speed	7.4	10.6	7.3	<<	Extensive improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common

Similarity of Focus Occupation to Associated Occupation: 71

Focus Occupation: Commercial and Industrial Designers (27-1021)
Associated Occupation: Mechanical Engineers (17-2141)

Work Activities	Exclusivity of Activity
Analyze project proposal to determine feasibility, cost, or time	69
Analyze technical data, designs, or preliminary specifications	47
Draw prototypes, plans, or maps to scale	57
Evaluate product design	78

Follow manufacturing methods or techniques	73
Read blueprints	10
Use computer aided drafting or design software for design, drafting, modeling, or other engineering tasks	58
Use computer graphics design software	70
Use computers to enter, access or retrieve data	3
Use drafting or mechanical drawing techniques	50

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus Occupation to Associated Occupation: 77

Focus Occupation: Commercial and Industrial Designers (27-1021)
Associated Occupation: Mechanical Engineers (17-2141)

Tools and Technologies	Exclusivity
Business function specific software	1
Cameras	2
Computers	1
Content authoring and editing software	1
Data management and query software	1
Industry specific software	1

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.